

**EMERGENCY FOOD ASSISTANCE TO VULNERABLE  
HOUSEHOLDS IN BARH EL GAZAL, CHAD  
APS-FFP-13-0000001**



**Baseline Report**

**September 2015**

## 1. Overview

According to the National Survey on Rural Households Food Security,<sup>1</sup> carried out by the World Food Program in October 2014, 2.4 million people in Chad are facing global food insecurity, and 428,000 of them are experiencing severe food insecurity. The area of intervention, Barh el Gazal (BeG), is located in the Sahelian part of Chad, close to the Lake Chad basin. Despite proximity to Boko Haram-related conflict, it is not directly impacted by the unfolding insecurity in the Lake Chad region. While the 2014 harvest in the Sahel was generally good<sup>2</sup>, this region experiences chronic food insecurity stemming from a combination of natural and political factors. In 2014, the BeG rainy season started in July instead of May and rains were erratic, causing crop and fodder production to drop below average (31% lower cereal production compared to 2013), pasture conditions to deteriorate, and food prices to increase slightly<sup>3</sup>. At the same time, cross border exchanges and revenues from livestock exportation declined due to civil conflicts in neighboring Central African Republic, Nigeria and Libya. Traditional trading of livestock and crops in this regional are predicted to deteriorate for pastoralists due to the ongoing conflict on the border with Nigeria, further decreasing household purchasing power. This disruption of the traditional transhumance routes preventing cross-border livestock sales has also affected pasture conditions. The accumulation of animals within Chad has caused overgrazing of pastures, as well as a depreciation of livestock and livestock sub-products. Economic mobility and remittances from Chadian migrants have also decreased, which has reduced food access for the poor in BeG. The lean season in Chad, which typically runs from May through September, is particularly difficult to withstand for the most vulnerable households in BeG, which include pregnant and lactating women and young children who have specific nutritional needs and less access to financial resources than men. Findings from the regional coordination of the Household Economy Analysis (HEA) project<sup>4</sup> in the Sahel show that the very poor in at least two departments in Northern Barh el Gazal will experience survival deficits. Survival deficits are defined per HEA standards as follows: “At this level, total income is insufficient to cover the cost of survival, even if full use is made of all the available low- and medium-cost coping strategies, and all the money usually used to protect livelihoods is switched to the purchase of staple foods. It is very probable that people facing this type of deficit will go hungry, unless they resort to other undesirable high-cost coping strategies. The primary objective of intervention at this level is to protect health and life in the short-term.”<sup>5</sup>

The IRC’s integrated health and nutrition program and recent assessments in BeG confirm that when shocks occur, households resort to harmful coping strategies such as selling livestock or assets, consuming seeds, incurring debts, and/or skipping meals. Although it is difficult to predict whether this crisis will have an impact on gender roles in the long term, there are survival strategies that are specific to women and children, such as early marriage, and child labor,<sup>6</sup> and women and older girls may resort to sex for survival. Recovery is made difficult by the recurrence of shocks and chronic poverty, which put livelihoods at risk and lead to a rapid deterioration of the nutritional status of children under five. According to last year’s SMART<sup>7</sup> survey, prevalence rates of global acute malnutrition (GAM) in BeG went from 12.3% in January-March 2014 (post-harvest) to 21.3% in August-September (lean season) of 2014, showing that poor access to food

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<sup>1</sup> Enquete Nationale sur la Securite Alimentaire des Menages Ruraux, ENSA

<sup>2</sup> <http://www.humanitarianresponse.info/operations/west-and-central-africa/document/avis-conjoint-sur-la-situation-alimentaire-et>

<sup>3</sup> WFP/FAO, Vulnerability Analysis and Mapping, five-year prices comparison accessed at <https://www.humanitarianresponse.info/operations/west-and-central-africa/document/presentations-food-security-nutrition-working-group-9>

<sup>4</sup> Presentation by the Food Security and Nutrition Working group as of April 9<sup>th</sup> 2015 accessible at <https://www.humanitarianresponse.info/en/operations/west-and-central-africa/document/presentations-food-security-nutrition-working-group-9>

<sup>5</sup> [http://www.savethechildren.org.uk/sites/default/files/docs/4\\_The\\_Practitioners\\_Guide\\_to\\_HEA\\_1.pdf](http://www.savethechildren.org.uk/sites/default/files/docs/4_The_Practitioners_Guide_to_HEA_1.pdf)

<sup>6</sup> <http://reliefweb.int/report/mali/2015-humanitarian-needs-overview-sahel-region>

<sup>7</sup> Evaluation de la situation nutritionnelle et de mortalité retrospective dans les districts sanitaires de la bande sahélienne, août-septembre 2014, Ministry of Health/UNICEF

during this time exacerbated the high burden of childhood illnesses and contributed, contributing to a peak in acute malnutrition.

The IRC has worked in BeG since 2010 and has been witness to consistently high GAM prevalence rates in this region, requiring sustained health and nutrition programming. For this project, the IRC conducted a desk review, interviews with partners, and a market assessment in order to identify the main determinants of this year's particularly harsh hunger gap in the region, and to establish the most appropriate intervention. The IRC dedicated specific attention to understanding gender dynamics in relation to both questions.

## 1. Objective of Baseline Survey

The purpose of this survey is to assess baseline levels of project indicators and guide program implementation strategy.

More specifically, this study aimed to:

- Determine baseline levels of project indicators;
- Assess the food security situation of the project target population.

The following indicators were measured:

- Socio – demographic Characteristics of households respondents
- Sources of revenues and expenditures items
- Food Consumption
- Coping Strategy
- Agriculture and livestock
- Market access
- Water and Sanitation
- Assistance

## 1. Methodology

Quantitative data collection was used to collect data on indicators from a representative sample of the beneficiaries.

### a. Household Questionnaire

Data collection was carried out using a questionnaire designed to reflect the indicators outlined in the IRC's FFP Monitoring & Evaluation plan. The questionnaire includes 8 sections: household identification and socio-demographic characteristics, sources of expenses and revenue, food consumption score, coping strategies, agriculture and livestock information, market accessibility, water and sanitation, and a section on humanitarian aid.

### b. Sampling

Household data collection targeted a random sample drawn from the 4,500 households benefiting from the project. The sample size (n) was calculated<sup>8</sup> with 11% of margin of error (E), and 95 % confidence level from the number of targeted households in each location, rather than the total population, in order to select a more representative sample.

x	=	$Z(c/100)2r(100-r)$
n	=	$Nx/((N-1)E^2 + x)$
E	=	$\text{Sqrt}[(N - n)x/n(N-1)]$

The targeted sample size for the baseline survey was 293 households.

The sample was taken from the 4,500 total households in 3 sites in Bahr el Gazal region (1,500 in Amsilep, 1,500 in Moundjoura, 1,000 in Dourgoulanga, and 500 in Salal), distributed proportionally to the number

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<sup>8</sup> Formula reference : <http://www.raosoft.com/samplesize.html>

of beneficiary households. The following table shows the distribution of the sample by intervention site.

Sub Prefecture	Number of household respondents
Amsilep	75
Moundjoura	75
Dourgoulanga	74
Salal	69
<b>Total</b>	<b>293</b>

### c. Data collection and analysis

Quantitative data have been collected from a sample of beneficiary households. The main target was the head of household, spouse or any other adult able to respond on behalf of the household and provide information on household composition, diet, and household expenses as well as household strategies to handle food-related issues. Thus, a household survey sample was drawn.

The data was collected from September 02 - September 10, 2015

### 2. Limitations (Please cite any)

The most notable difficulty encountered was in locating respondents, as many of the heads of households were away for various reasons, including fieldwork for the planting season, which is already underway.

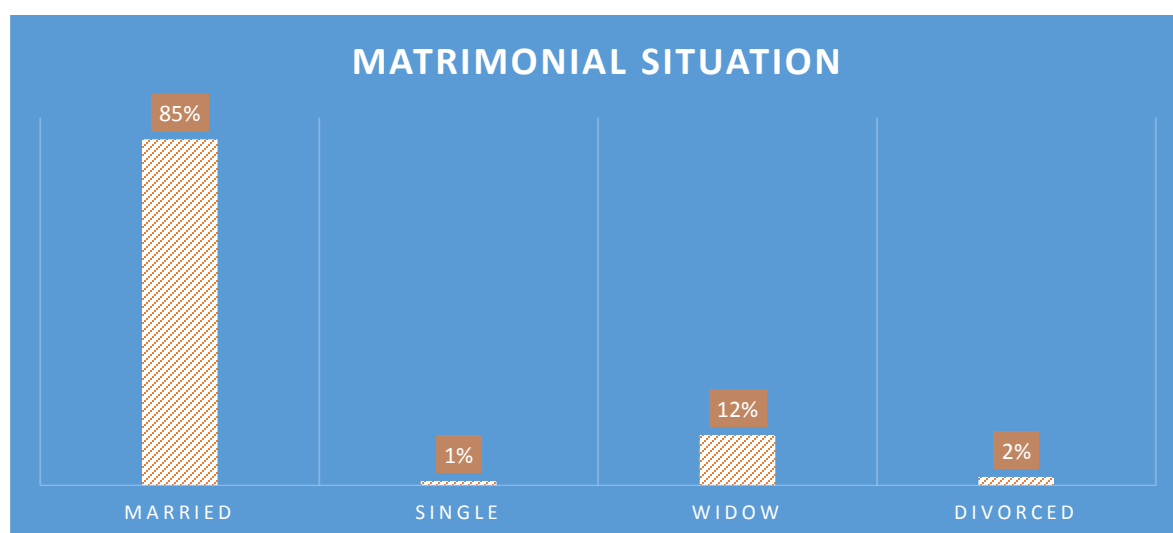
### 3. Ethical Considerations

Interviews were held with people who were ready and willing to participate on a voluntary basis, and the provided the IRC with their consent before conducting the survey. Caution was taken to avoid excessive use of the participants' time.

### 4. Main Findings

#### a) Socio-demographic characteristics of respondents

After analysis, findings show that the majority (85%) of interviewees are married, 12% are widowers, 2% are divorced, and 1% are single.

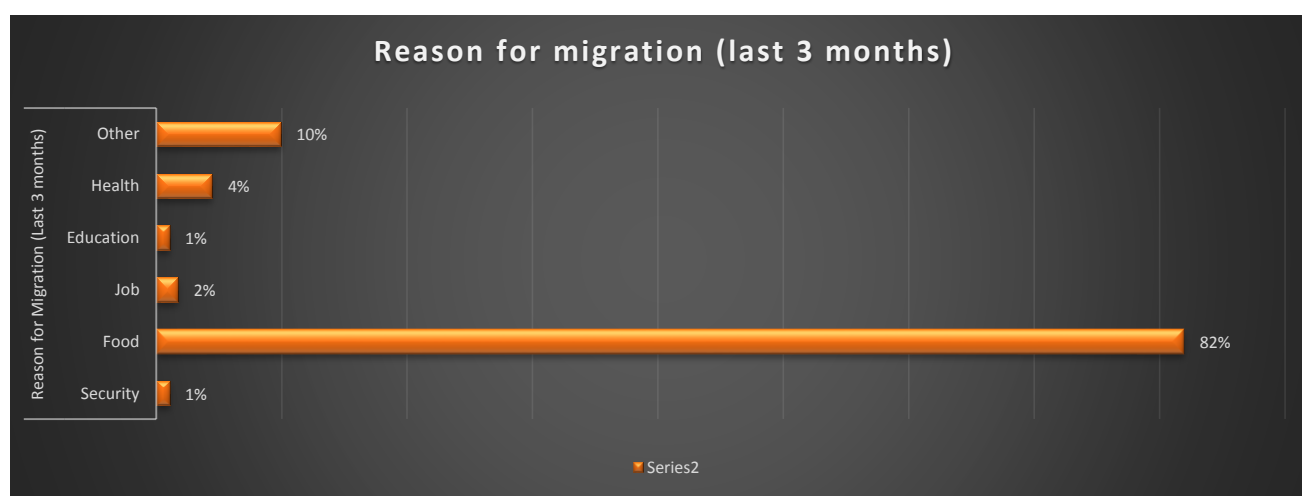


As shown in the table below, sex distribution is proportionate among the sample with 21% of men and 22% of women. The same is true for girls and boys, at 29% and 28%, respectively.

Number of persons per household by gender and age					
Men	Women	Boys	Girls	Average household size	Minimum Household size
<b>2</b>	<b>2 (1,9)</b>	<b>3 (2,5)</b>	<b>3 (2,6)</b>	<b>9</b>	<b>3</b>
22%	21%	28%	29%	100%	

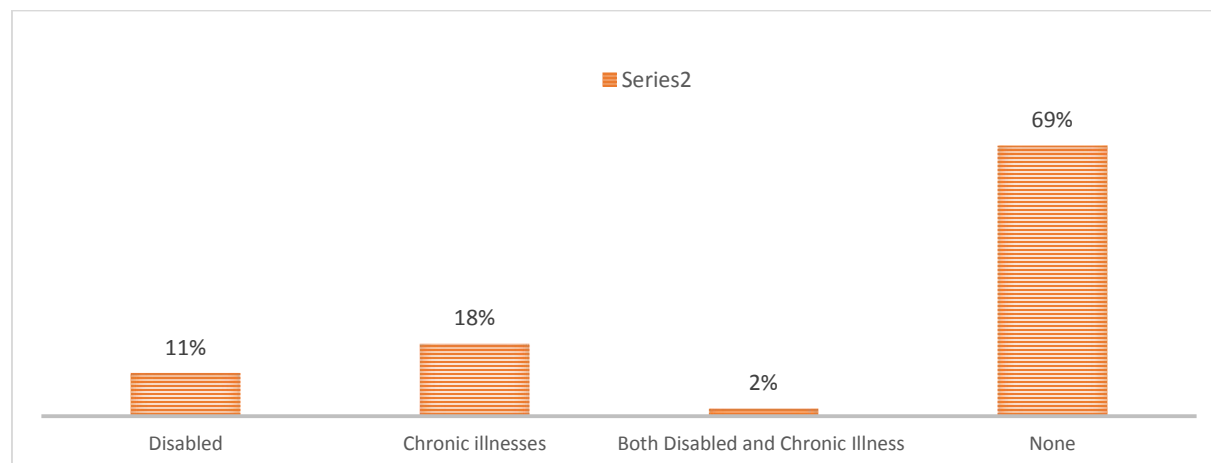
The average size of household is about nine persons, which is greater than normal average of six persons per household in Chad. Given the high prevalence of food insecurity, some households that do not have the capacity to meet their basic needs have combined with wealthier households in order to ensure food.

According to the diagram below, the main reason (82%) that pushed household members to migrate outside of their home villages is to meet their food needs.



The survey also found that the average number of under-five children per household is about two.

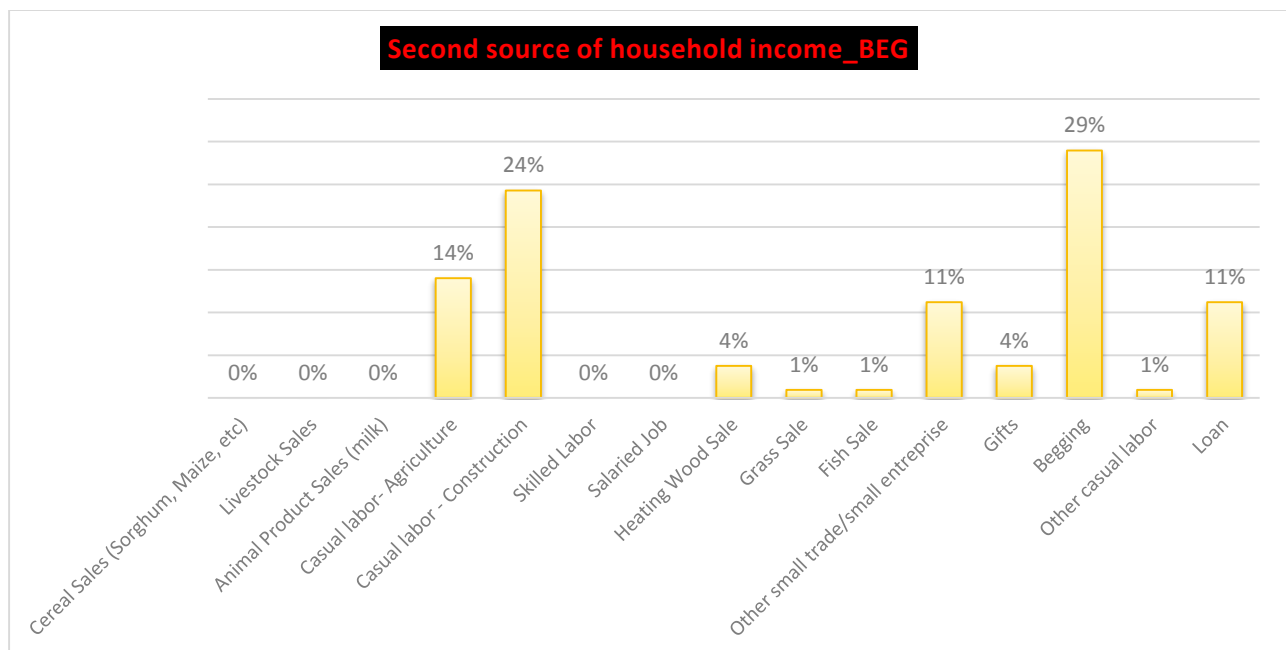
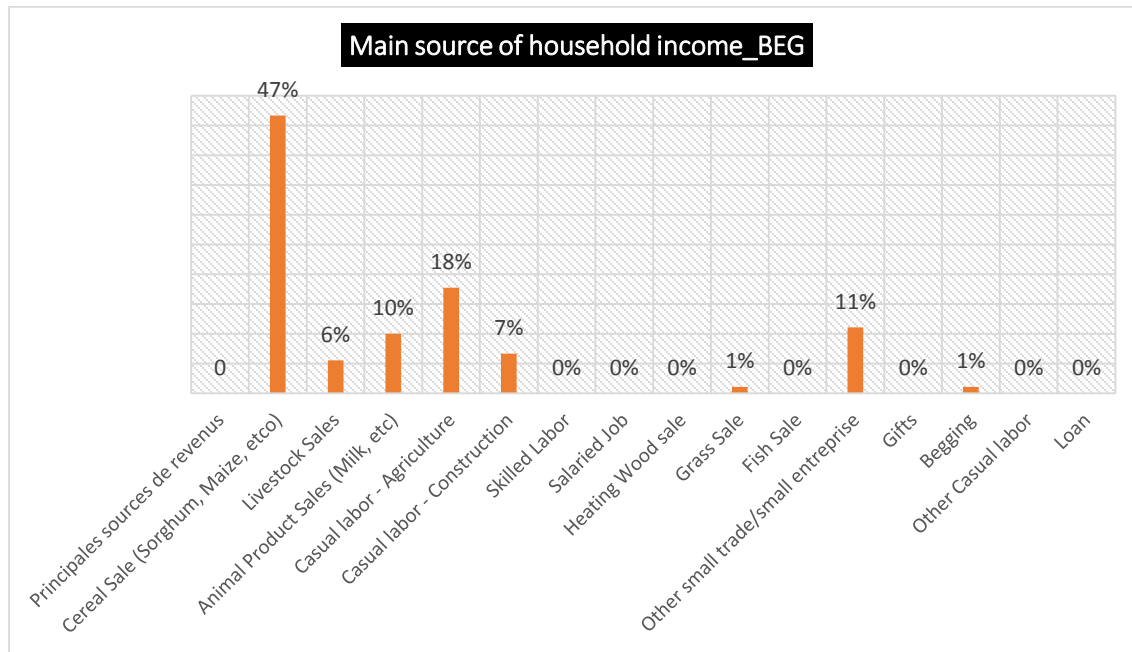
Due to economic difficulties and food insecurity, most heads of households do not have the resources to care for their family members, some of whom are very vulnerable. About 11% of households have reported family members who were disabled, 18% with chronic diseases and 2% both disabled and with a chronic disease.



## b) Sources of revenues and expenditures items

### a. Sources of revenues

For 47% of households in the BeG, the main source of income is the sale of cereals such as sorghum, millet and maize.



29% of the population reported resorting to begging as a complementary source of income, while 24% of households rely on occasional construction work.

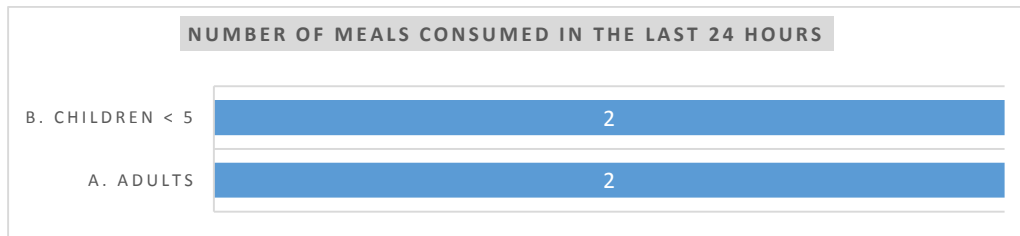
### b. Expenditures

Nearly all households (98%) reported food as their primary expenditure. Secondary expenditures are mainly medical fees (35%), hygiene items (25%) and transportation (22%).

### c) Food Consumption

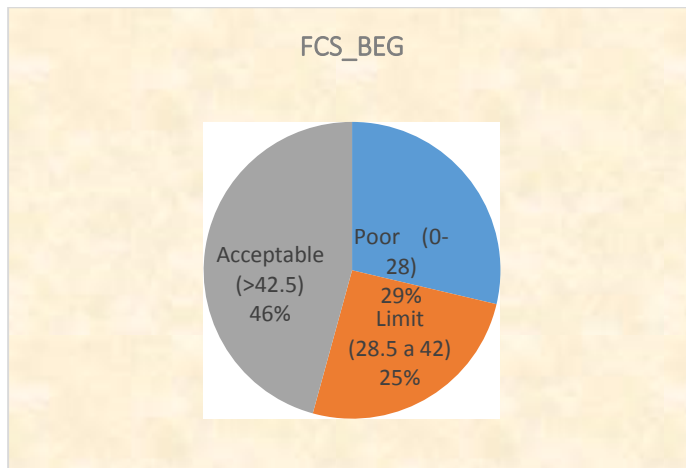
#### c. Food intake

On average, both children and adults eat twice a day, which is lower than the norm of three meals a day customarily eaten by people in the BEG. However, it was difficult for respondents to quantify the number of times a child eats food daily, as children are very mobile and may eat with other families without the knowledge of their parents.



#### d. Food Consumption Score (FCS)

Only 46% of household have an acceptable FCS, 25% with a limited FCS, and 29% with a poor FCS.



### d) Coping Strategies

#### a. Food Related Coping Strategies

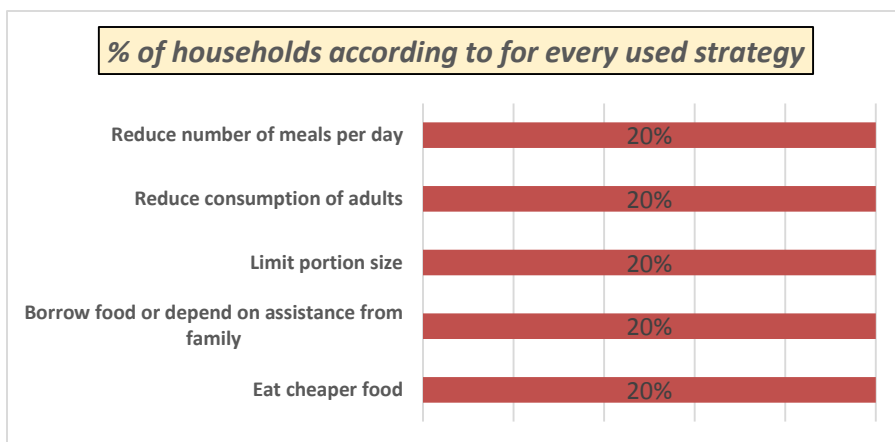
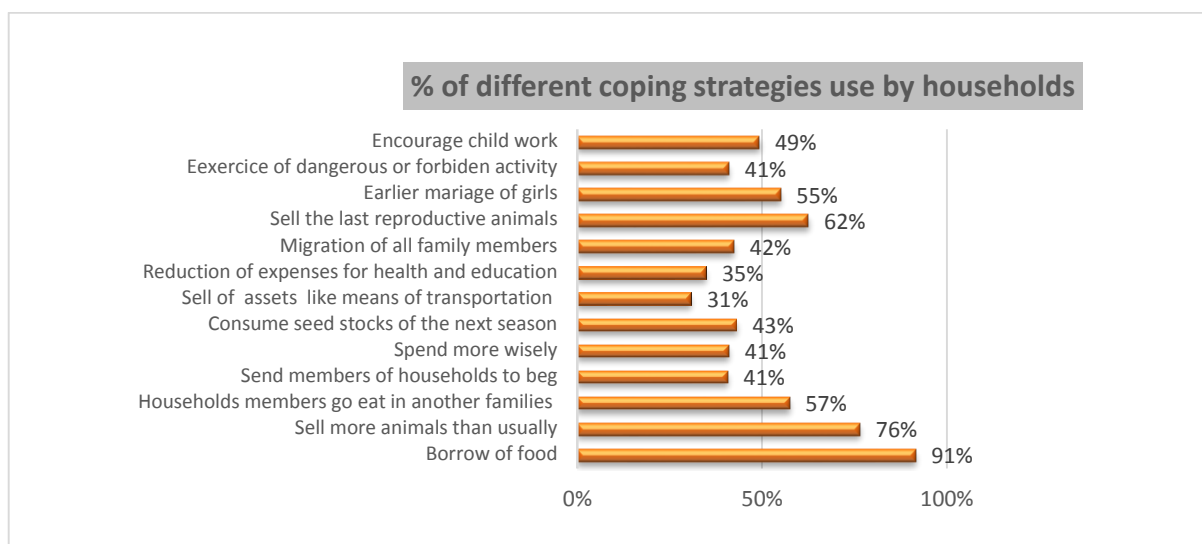
Various food related coping strategies are equally used by households in the same proportion at around 20%.



As children are more vulnerable to malnutrition than adults, they are particularly affected by coping strategies related to the reduction of the number or quality of food intakes, reducing the number of meals per day, limiting portions size of meals, and eating cheaper food.

b. Other Coping Strategies

The other coping strategies used during the last 30 days varied widely. The diagram below shows the percentage of households which resorted to one or another of them. The most frequently used is based on borrowing food to which 91% of households have resorted).



Some of the strategies listed below are considered negative as they are likely to affect the health and dignity of a household or cause the irreversible loss of essential livelihood.

#	Negative coping strategies	Number of households	% of households
1	Exercise of dangerous or forbidden activity	120	41
2	Send members of households to beg	119	41
3	Reduction of expenses for health and education	102	35
4	Encourage child work	144	49
5	Earlier marriage of girls	161	55
6	Consume seed stocks for the next season	126	43

7	Selling of assets such as means of transportation	90	31
8	Sell the last reproductive animals	183	62

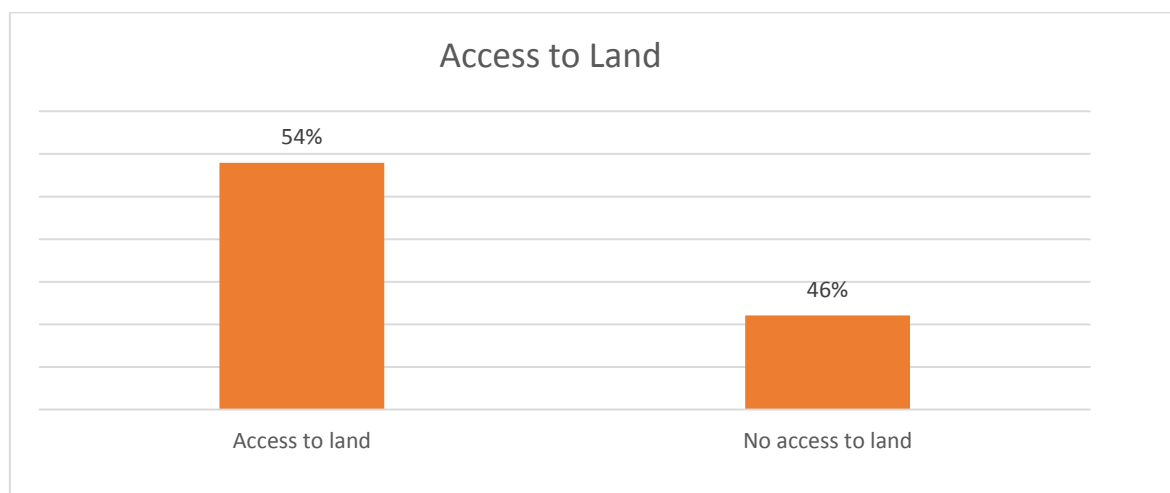
In total, 45% of households reported resorting to at least one negative coping strategy. Children are particularly impacted by the “Encourage child work” coping strategy, with girls being sent to work as maids in other households. Girls are also specifically targeted for earlier marriage, and also fall under the “Exercise of dangerous or forbidden activity” category through prostitution, or the exchange of sexual services for goods or money. Families aim to save money through reducing health and education expenses by not sending their children to school or to the health clinic, and attempt to make money by sending family members to beg, or sell what means of transportation they may have.

The remaining 55% of households did not resort to any negative coping strategies.

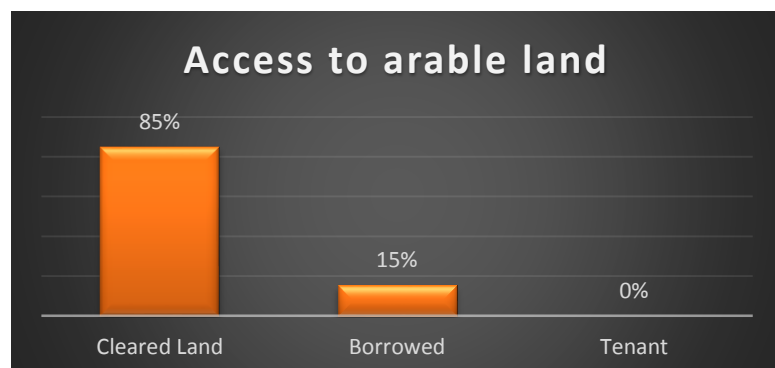
#### e) Agriculture and livestock

##### e. Agriculture

Overall, it is difficult to access land in the BeG, as acquiring land in this region is linked to family history and hierarchy. Local customs and laws have favored families who have lived on the land for longer over newer arrivals, leaving 46% of households without access to land. The 54% of households that do have access to land have an average of 1.2 hectares per household:

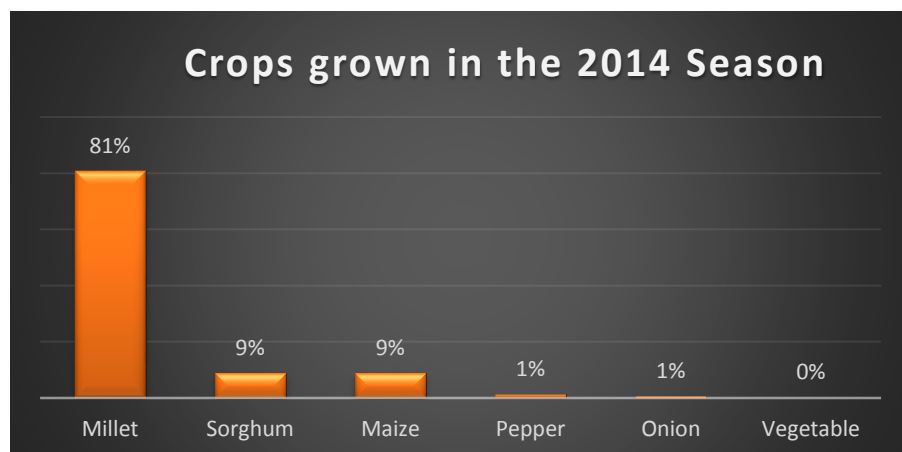


Among those with access to land (cultivated or fallow), 85% are owners and 15% borrow for free, though it is common for those borrowing to provide in-kind compensation to the land owners. No respondents reported renting land.



## Types of crops

The various speculations grown in BEG are distributed as follows:

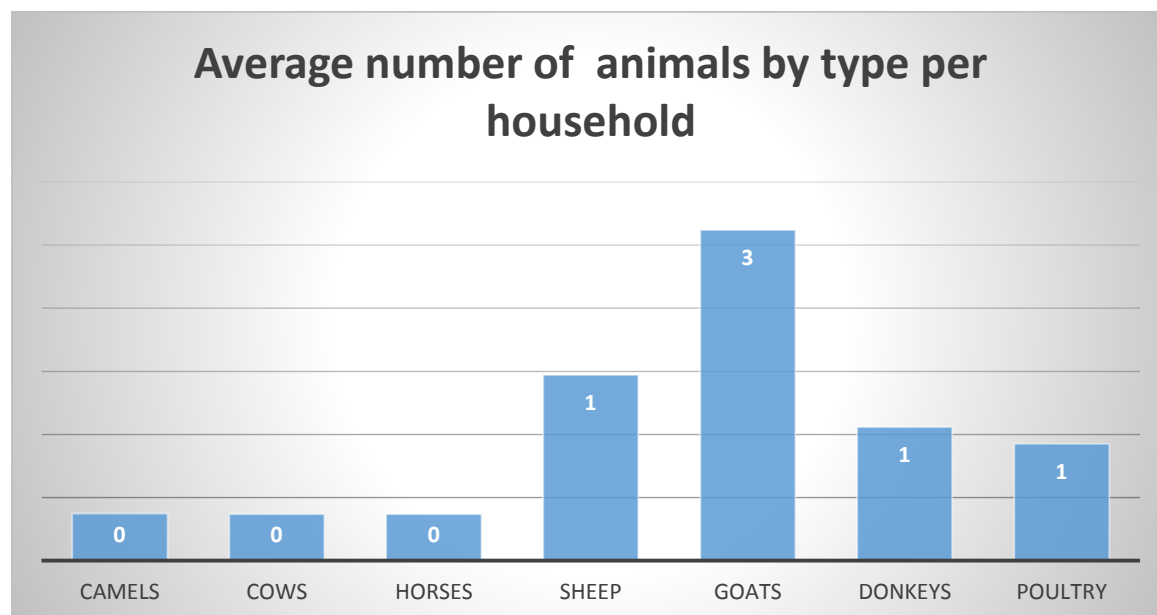


Millet is the most commonly grown, followed by sorghum. Vegetable cultivation is marginal.

### f) Livestock:

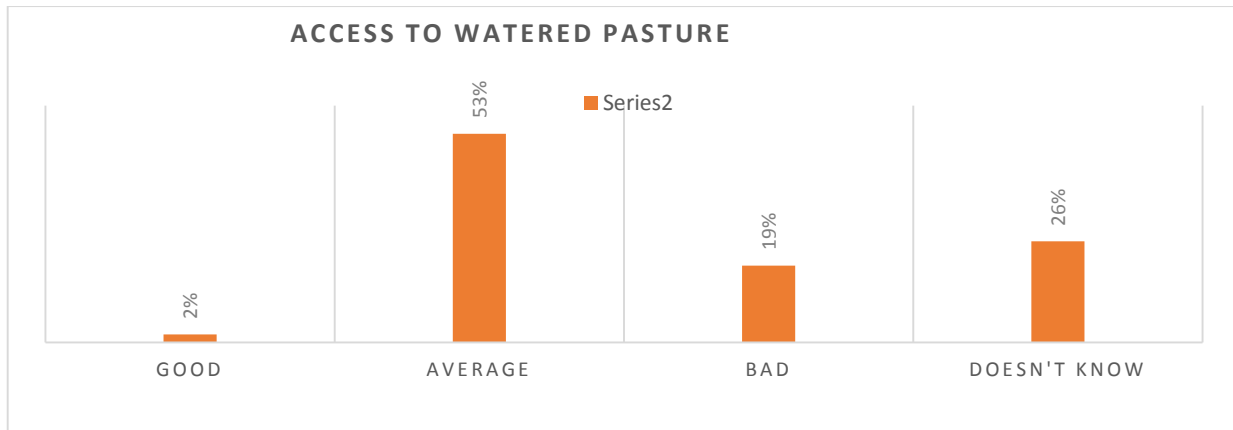
On average, each household raises three goats, one sheep, one donkey and one chicken.

Among the surveyed households, all very poor to poor, none are raising cattle, camels or horses.



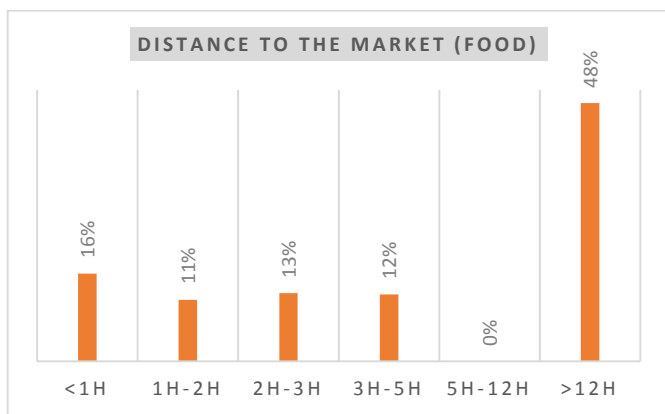
### f. Pasture

On average, 53% of respondents' herds have access to grazing pastures. However, respondents reported significant difficulty in grazing livestock, due to limited water resources in the area.

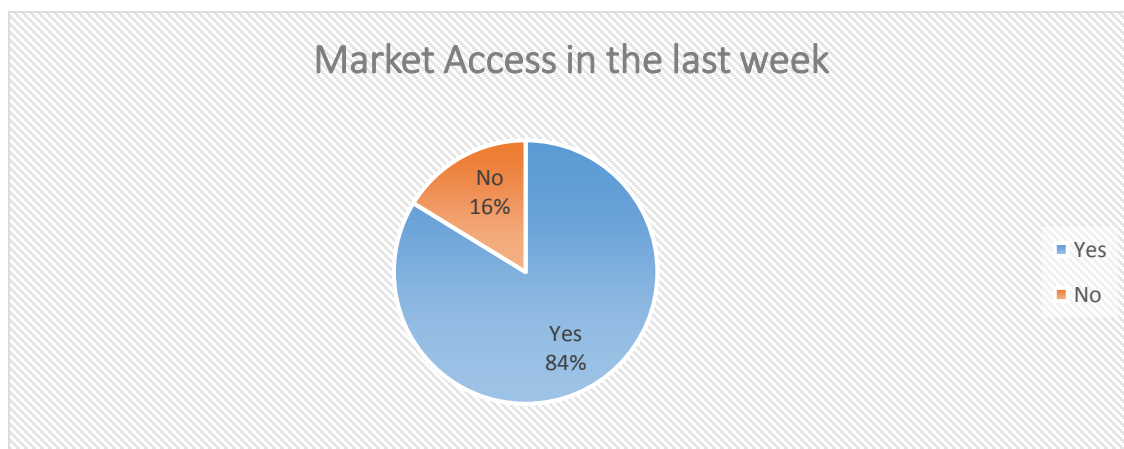


#### g) Market access

In general, households are quite distant from markets, and travel time to markets is significant. Travel times ranged from 1-2 hours to more than 12 hours.

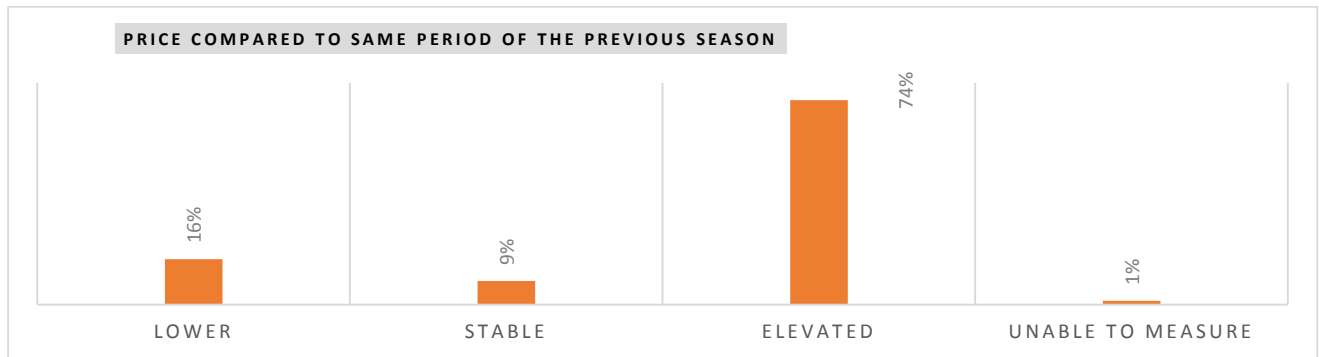


Nevertheless, the majority of households had bought food in a market during the week before the survey.

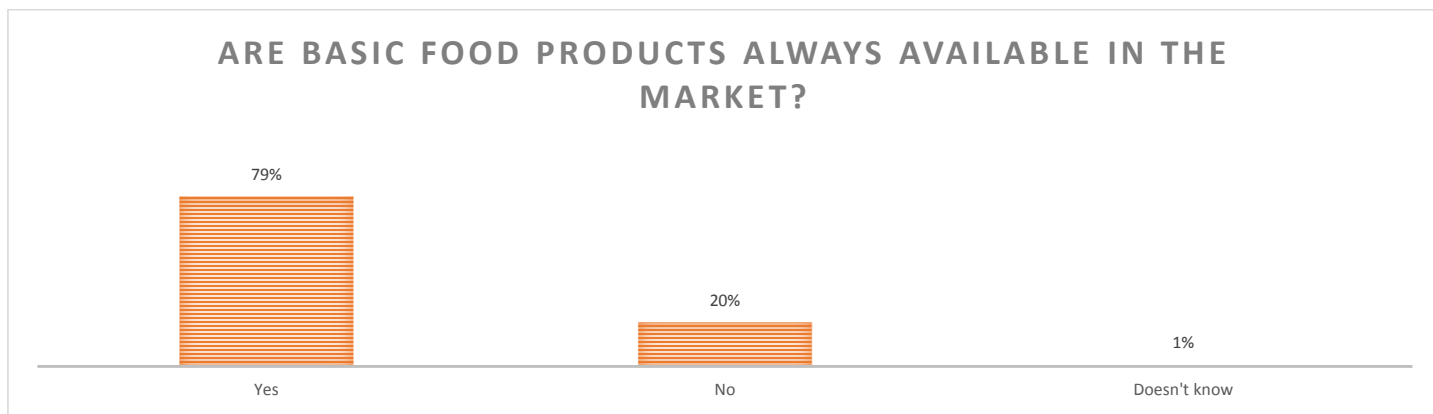


Crop failures of the past agricultural seasons continue influence prices of agricultural commodities. For 74%

of households, prices are much higher as compared with the same period of last year.



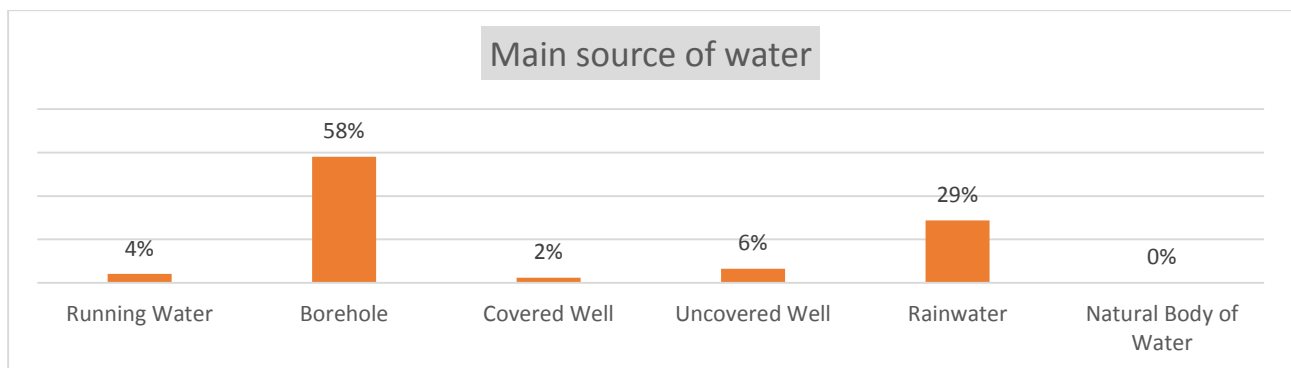
For 79% of households, food commodities are available, despite the distance to the nearest market.



## **h) Water and Sanitation**

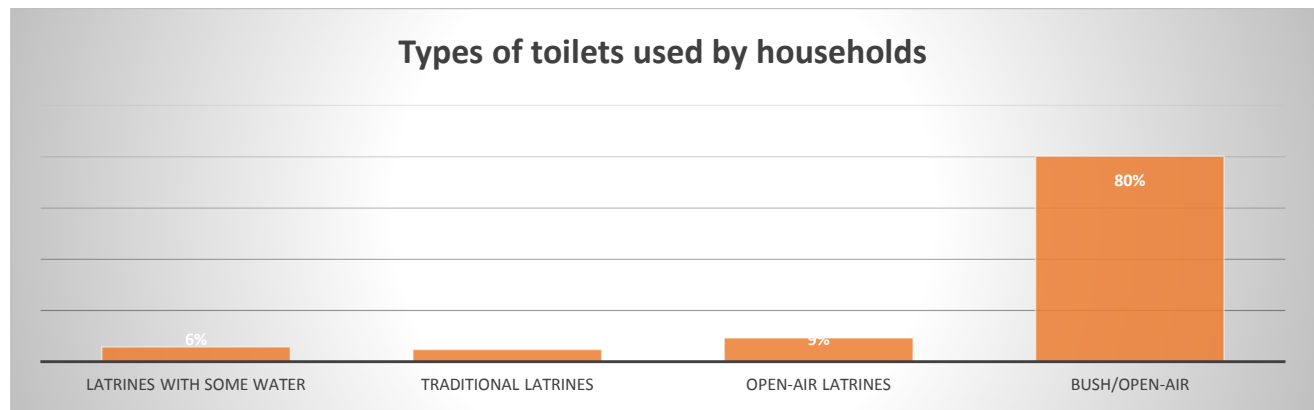
### **Water**

Fifty eight percent of households have access to a borehole, while 29% are still consuming rainwater.



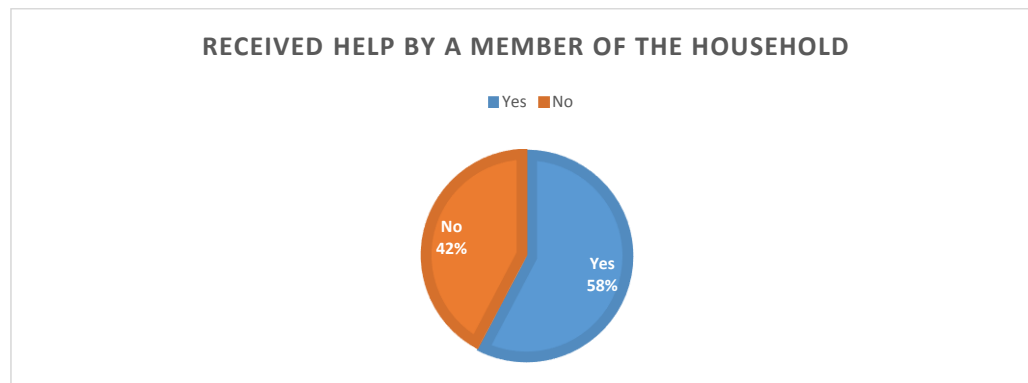
## Toilets

Eighty percent of households defecate in the bush or in the open, exposing them to disease.



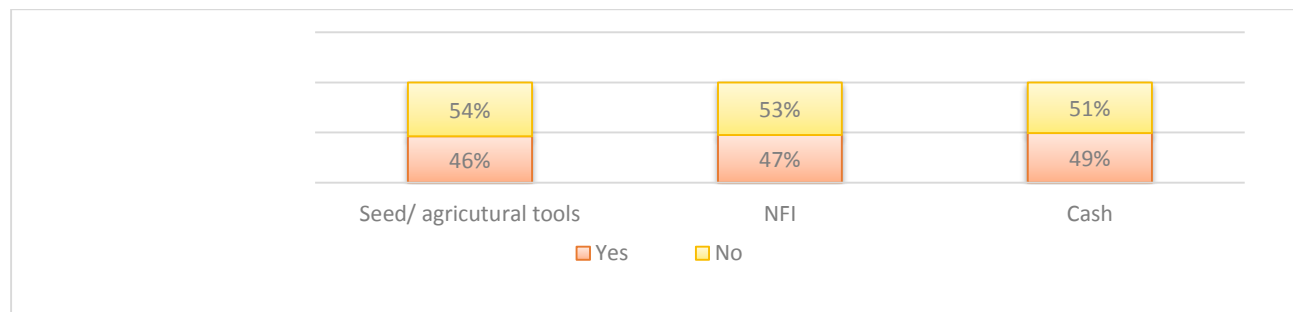
### i) Assistance

Fifty eight percent of households have received assistance from an NGO operating in the area.



### Type of humanitarian aid received

Slightly less than half the households have already received some humanitarian assistance in 2014. 46% received seeds and agricultural tools, 47% received non-food items and 49% received cash, though some of these assistance programs have since ended.



Most of the households interviewed (58%) reported that they preferred that relief be delivered in cash or food, or both.

Type of assistance preferred	Number of households	% of households
Money	145	49%
Supplies	169	58%
Cash + supplies	169	58%
Animals	139	47%
Others, to specify	60	20%
<b>Total households surveyed</b>	<b>293</b>	<b>100%</b>

## Conclusion

In conclusion, the study was able to proceed largely as planned even with some obstacles. Despite humanitarian interventions in the region, IRC is working toward covering the gaps and food security needs of the population. Forty five percent of the population resort to negative coping strategies as a direct impact of food insecurity, with the highest amount of households (61%) resorting to selling livestock, an essential livelihood. Coping strategies are common to supplement the lack of food, with 91% of households reporting they had borrowed food within the last thirty days of the survey. A reported 46% of households have a lack of access to land. This combined with a lack of crop variation (81% of crops being millet), elevated market prices with extended travel times, and unstable incomes, the situation remains unstable in the BeG despite a reported 84% of households having market access. Food insecurity and malnutrition remain a major threat to the target population, making provision of assistance in the coming months crucial to beneficiaries' health and nutritional wellbeing.

**d. Logical Framework**

Objective/Result	Indicators	Type	Baseline	Target	Source of Verification	Frequency	Data collected by:
<b>GOAL:</b> To support vulnerable households covering their basic food needs during the 2015 lean season							
<b>Objective:</b> Improve access to food and basic needs for <b>4,500</b> food insecure households in Bahr el Gazal							
<b>Result 1 :</b> Targeted households have their basic food needs covered during the lean season	% the targeted beneficiaries maintain acceptable levels of food consumption (FCS > 42) during the intervention		<b>1,656 households (46%)</b>	<b>3,600</b> households (80%)	Distribution lists  Monthly monitoring reports  FCS study	Monthly	M&E Team and Program Team
	% BeG's food insecure households benefiting from direct assistance (cash distributions and food vouchers)	Output	<b>0</b>	64%	Monthly activity reports, PDM reports	Monthly, Quarterly	M&E Team and Program Team
	# cash transfers and food vouchers distributed to beneficiaries	Output	<b>0</b>	<b>Four (4)</b> - monthly cash transfers to 4500 HH - monthly food vouchers distribution to	Monthly activity reports, PDM reports	Quarterly	M&E Team and Program Team



				3000 HH			
	Value of cash transfers distributed to targeted beneficiaries.	Output	0	<b>1,224,000 USD</b> <b>(68 USD * 4500 HH * 4 distributions)</b>	Monthly activity reports, PDM reports	Quarterly	M&E Team and Program Team
	# months from donor-signed agreement to distribution of cash and food vouchers to beneficiaries.	Output	0	1 <sup>st</sup> distribution: 1 month	Monthly activity reports, PDM reports	Monthly, Quarterly	M&E Team and Program Team
	# of beneficiaries targeted and reached, disaggregated by sex and age	Output	0	Targeted : <b>40,500</b> <b>20,250 F</b> <b>20,250 M<sup>9</sup></b>	Monthly activity reports, PDM reports	Monthly, Quarterly	M&E Team and Program Team
<b>Result 2</b> : Targeted households' livelihoods are secured throughout the intervention	% of targeted beneficiary households who do not resort to negative coping strategies during the intervention	Outcome	55%	60%	PDM reports		M&E Team and Program Team
	% of trained HH applying at least two home budgeting	Output	0	50% of HH	Monthly activity reports, training	Quarterly	Program Team

<sup>9</sup> When writing the proposal, an average of 6 members per HH was assumed based on previous HEA assessments, leading to a target number of 27,000 individuals (4,500 households x 6 per household). The survey revealed that the average household size was 9, therefore the target has been increased to 40,500 (4,500 households x 9 per household) to more accurately represent the beneficiaries targeted.

	principles from the awareness-raising package in their resource management				reports		
	% of the targeted individuals who can name three key practices to prevent malnutrition at the end of the distribution cycle	Output	0	21,600 individuals = 80%	Monthly activity reports, training reports, PDM		
	% of HHs targeted reporting a decrease in use of negative coping strategies as measured by baseline and endline studies	Outcome	0%	60%	Monthly activity reports, training reports, PDM	Twice	Program team
	Lessons learned from the program are collected, analyzed and shared through an evaluation report	Output	0	1 report	Final project report  Final study	Once	M&E Team and Program Team

